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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/695,492

10/28/2003

David A. Johnson

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EXAMINER

PHAM, HAI CHI

ART UNIT

PAPER NUMBER

2861

DATE MAILED: 07/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/695,492

Applicant(s)

JOHNSON, DAVID A.

Examiner

Hai C. Pham

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04/24/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-21, 31-36, 39 and 40 is/are allowed.
- 6) ☒ Claim(s) 1, 3-8, 22, 24-26, 28-30 and 37 is/are rejected.
- 7) ☒ Claim(s) 2, 23, 27 and 38 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 16 is objected to because of the following informalities:

- Line 8, "(iii)" should read --(iii)--.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1, 3-8, 22, 24-26, 28-30 and 37 are rejected under 35 U.S.C. 102(e) as being anticipated by Zaima (Pub. No. U.S. 2003/0128381).

Zaima discloses a printing system comprising a print unit (printer B, Fig. 1) configured to apply a colorant to a test element (electrostatic drum 4) and to a print medium (print sheet), and a calibration system (e.g., photosensor 40) configured to measure one or more colorant levels of the colorant (e.g., density level) applied to the test element (drum 4) before the colorant is in a finished state (the color patches are formed on the electrostatic drum 4, the color patches are then read by the photosensor 40 whose output signal is converted into density level of the colorants) (paragraph [0131]), measure one or more color values of the colorant applied to the print medium after the colorant is in the finished state (the test pattern 1 is formed on the print sheet after the image is transferred and fixed onto the print sheet, the test pattern 1 is read and color RGB values are obtained and converted into optical densities) (paragraphs [0009], [0079]-[0085]), and establish a correlation between the one or more measured colorant levels and the one or more measured color values such that the correlation can be utilized to calibrate the print unit (a LUT 25 is established the relationship between the color RGB values obtained from the reading of the test pattern 1 on the print sheet and the density level constituting the color patches formed on the electrostatic drum 4) (paragraph [0009], [0131]-[0132]). With regard to claims 22, 24-25, Zaima teaches a storage medium holding program code for performing the above mentioned process and executable by a computer (paragraph [0156]).

Zaima further teaches:

- the test element being a print media transport belt (paragraph [0154]),

- The calibration system is further configured to calibrate the print unit to adjust a colorant level of the colorant to the test element (the second control system forms patches in the non-image area of the electrostatic drum 4 during normal image formation, detects the density of the patches and correct the data for the LUT 25 when a shift density level between the density signal and the result of the measurement is found) (paragraphs [0009], [0135]-[0137]),
- The colorant is in the finished state after being fused onto the print media (the test pattern formed on the print sheet being transferred and fixed) (paragraph [0009]),
- The colorant is in the finished state after being formed as a permanent image on the print media (the test pattern formed on the print sheet has been fixed to form a permanent image such that it can be read while being placed on the original glass plate 102 of the reader A) (paragraph [0082]),
- The calibration system comprises one or more sensors configured to measure the one or more colorant levels and the one or more color values (CCD sensor 105 for reading the test pattern 1 and the photo sensor 40 for measuring the density level of the test pattern formed on the drum),
- The printing system is a printing device (printer B).

***Allowable Subject Matter***

4. Claims 9-21, 31-36 and 39-40 are allowed.

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5. Claims 2, 23, 27 and 38 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is an examiner's statement of reasons for allowance: the primary reason for the indication of the allowability of claims 2, 9, 23, 27, 31, 38 is the inclusion therein, in combination as currently claimed, of the limitations regarding the calibration system and method configured to "measure one or more colorant levels of the colorant applied to the test element before the colorant is in a finished state," "convert the one or more measured colorant levels to corresponding one or more predicted color values," "compare the one or more predicted color values to target color values," and "calibrate the print unit if a difference between the one or more predicted color values and the target color values exceeds a threshold value," which are not found taught or suggested by the prior art of record considered alone or in combination.

Claims 16, 36 and 39-40 are patentable over the prior art patents and printed publications because of the specific configuration of the calibration system and method used in the printing system, which comprises selectable calibration modes including a first calibration mode configured to (i) measure colorant levels of a colorant applied to a test element, (ii) convert the measured colorant levels to predicted color values, (iii) compare the predicted color values to target color values, and (iiii) calibrate the print unit to adjust a colorant level applied to the test element if a difference between the predicted color values and the target color values exceeds a threshold value; and a second calibration mode configured to (i) measure color values of the colorant applied

to a print media after the colorant is in a finished state, and (ii) establish the correlation between the measured colorant levels and the measured color values. The combined limitations are not taught or suggested by the prior art of record considered alone or in combination.

Claims 10-15, 17-21 and 32-35 are allowable because they are dependent from the above claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Response to Arguments***

7. Applicant's arguments with respect to claims 1, 3-8, 22, 24-26, 28-30 and 37 have been considered but are moot in view of the new grounds of rejection.

### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai C. Pham whose telephone number is (571) 272-2260. The examiner can normally be reached on M-F 8:30AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vip Patel can be reached on (571) 272-2458. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



HAI PHAM  
PRIMARY EXAMINER

June 29, 2006